V	lirk	$\mathbf{O}_{\mathbf{I}}$	rder	· ID	628	77
71	1 45% K	~//	ıucı	117	020	11

Required Date: 10/22/2010



Page 1

Tuesday, October 12, 2010 1:04:37 PM

Item ID:

Revision ID:

D117-762-041

Accept



Setup Start

Stop



Item Name: **Start Date:**

10/12/2010

Replacement Skidtube

Start Qty: 1.00

Req'd Qty: 1.00



Cust Item ID: Customer:

Reference:

Approvals:

Date: 1010 12 Tooling: Date:

SPC (Y/N):

Date:

Date:

Run Start

Stop

Sequence ID/ **Work Center ID**

Operation Description Set Up/ **Run Hours** Tool ID

Tool # Plan Accept Code Qty

Reject Qty

Reject Insp. Number Stamp

Draw Nbr

Revision Nbr

Rev A

D3582

100

Document Control

DOCUMENT CONTROL

Memo

Photocopy bluefile & type labels per PPP D117-762-041

CHG001

120

CNC Bend 1

CNC Delta 100 Bender

0.00

0.00

0.00

BENDING MACHINE - SKIDTUBES

Memo

0.00

Bend tube as per program D3582 on CNC Bender and Dwg D3582. Folio 3, use bending aid DT9632

2- cut fwd end of tube as per dwg



	. оориоо —				•	* . ,	4	4
W/O:	rg*		WORK ORDE	R CHANGES		``		1
DATE	STEP	/	PROCEDURE CHANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
		·.	.		.*			``
								-
								, in
		,					-	*
Part No		PAR #	e: Fault Category:	NCR: Yes	No DQ	\:	_ Date: _	
	Pose	alution.	Dianosition	O A . N/O (Nanad.		Doto: "	

NCR:		WORK ORDER NON-CONFORMANCE (NCR) Corrective Action Section B								
DATE	STEP	Description of NC Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Verification Section C	Approval Chief Eng	Approval QC Inspector		
								,		
,	<u>る</u>									

Work Order ID 62877

Tuesday, October 12, 2010 1:04:37 PM

Item ID:

D117-762-041

Accept



Setup Start



Revision ID:

Item Name:

Replacement Skidtube

Start Date:

10/12/2010

Start Qty: 1.00

Required Date: 10/22/2010 Req'd Qty: 1.00



Cust Item ID: Customer:

Tool ID

Reference:

An	nras	als:
ΔD	ULUI	ais.

Process Plan:

Date:

Date:_____ Tooling:

SPC (Y/N):

Date:

Tool # Plan

Code

Date:

Qty

Accept

Stop

Reject

Qty



Sequence ID/ Work Center ID

130

Skidtubes Skidtubes

Description

Set Up/ Run Hours

0.00

Skidtubes

Operation

Memo

0.00

1-Cut Aft end using DT8185

2-Deburr ends

3-Drill Aft Cap holes using DT8678 ***DO NOT OPEN AFT CAP HOLE***

4-Locate DT 8973 & Drill Ground wire hole on top of Tube.

5-Install 3/16 cleco in Ground wire hole ,then drill all X-Bolt holes using 3/16" drill.

6-Drill pilot holes for wearplates using DT8974

7-Open wearplate holes to Ø19/64" (0.297") as per Dwg D3582.

8- open ground wear holes to 0.391" as per section B-B

9-Open Aft Cap holes using 209" drill.

10-Drill pilot holes for section D-D and E-E. Holes must be laid out by hand. Mark out Center line and make sure that 6.65 and 5,906 measurements are respected. Double check before drilling, do not open holes to finish size.

Run

Start

Stop

Reject

Number Stamp

	Dart	Aeı	rosi	nace	Ltd
٠.		, , , , , ,	~~	~~~	

W/O: WORK ORDER CHANGES			t	3.			
DATE	STEP	PROCEDURE CHANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
		. '					

Part No:		PAR #:	Fault Category:	NCR: Yes No	DQA:	Date:	- 488 ·
	Resolution:		Disposition:	QA: N/C Closed		Date:	

NCR:		WORK ORDER NON-CONFORMANCE (NCR)									
		Description of NC	Corrective Action Section B			Verification	Approval	A			
DATE	STEP	Section A .	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Chief Eng	Approval QC Inspector			
								!			
							·				
											
				٠.							
						,					

Work Order ID 62877

Tuesday. October 12. 2010 1:04:37 PM



Page 3

Item ID:

D117-762-041

Accept

Setup Start

Stop



Revision ID:

Item Name:

Replacement Skidtube

Start Date:

10/12/2010

Start Oty: 1.00

Required Date: 10/22/2010

Req'd Qty: 1.00



Cust Item ID: Customer:

Tool ID

Reference:

				_
A	nn	ro	VЯ	8:

Process Plan:

Date: _____

Tooling:

Date:

Date:

Run Start

Date:

SPC (Y/N):

0.00

Set Up/

Run Hours

Tool # Plan

Code

Reject Accept Qty Oty

Reject Number

Stop

Insp. Stamp

Work Center ID 140

Sequence ID/

Skidtubes

Skidtubes

Skidtubes

Operation

Description

0.00 Memo

1-Weld fwd cap D2964 per dwg D3582 and OSY004 A/R AL ROD Batch: <u>M1/1385/</u> M1/1577-8

2-Grind flush

150

QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

Memo

0.00

0.00

160

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

Dart .	Aero	space	Ltd
--------	------	-------	-----

W/O:			WO	RK ORDER CHANG	ES			`
DATE	STEP	PR	OCEDURE CHAN	IGE	Ву	Date Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
			-				1 100 Mg/	
~								
			,					
Part No: PAR #:			Fault Categ	ory:	_ NCR: Yes 1	lo DQA:	Date: _	
Resolution:			Disposition	:	_ QA: N/C Clo	sed:	Date: _	
NCR:			WORK ORDE	R NON-CONFORM	ANCE (NCR)			
DATE	STEP	Description of NC	Description of NC		Section B Verific		g Approval	Approval
		Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Chief Eng	QC Inspector
							l I	
	1							
10 p - 10 a a a a a a a a a a a a a a a a a a								
						,		
						,		

Work Order ID 62877

Tuesday, October 12, 2010 1:04:37 PM



Page 4

Item ID:

D117-762-041

Accept

Setup Start

Stop



Revision ID:

Item Name:

Replacement Skidtube

Start Date:

10/12/2010

Start Qty: 1.00

Required Date: 10/22/2010 Req'd Qty: 1.00



Cust Item ID:

Customer:

Reference: Approvals:

Date:

Date: _____

Tooling:

SPC (Y/N):

Date:

Run Start

Stop



Sequence ID/ Work Center ID

170

HandFinish

Hand Finishing

Operation Description

Chemical Conversion Coat per QSI005 4.1

Set Up/ **Run Hours**

0.00

0.00 11 1 Tool ID

Date:

Tool # Plan Code

Accept Qty

Reject Qty

Reject Number

Insp. Stamp

180

Quality Control

QC3- Inspect Part Finish

Memo

Memo

0.00

0.00

Dart Ae	rospace	Ltd					ж.	1 1 3 2.	. •
W/O:			WC	RK ORDER CHANGE	S				, 1
DATE	STEP	PF	OCEDURE CHANGE			Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
								*	
, op. 11									
			7.00	10 TH		-			
Part No	:	PAR #:	Fault Cate	jory:	NCR: Yes	No DQ	A:	_ Date: _	
	R	esolution:	Disposition):	QA: N/C C	losed:		Date: _	<u> </u>
NCR:			WORK ORDE	R NON-CONFORMA	NCE (NCI	3) .			,',
DATE	CTED	Description of NC	Corrective Action Section		Section B. Verifi		cation	Approval	Approval
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign Date	& Sect	ion Ci	Chief Eng	QC Inspector
,				•					
ري ن د ا		,				,			
1.4		P - P				i			
				· •					
i		,							

Page 5

Tuesday, October 12, 2010 1:04:37 PM

Item ID:

D117-762-041

Accept



Setup Start

Stop



Revision ID:

Item Name:

Replacement Skidtube

Start Date:

10/12/2010

Start Qty: 1.00

Req'd Qty: 1.00 **Required Date:** 10/22/2010



Date: _____

Cust Item ID:

Customer:

Reference:

A	nr	rc	va	ils:	

Process Plan:

Date:

Tooling:

SPC (Y/N):

Date:

Date:

Run

Start

Stop



Sequence ID/

Work Center ID

190

Skidtubes Skidtubes

Operation Description

Set Up/ **Run Hours**

0.00

Tool ID

Tool # Plan

Code

Accept Qty

Reject Qty

Reject Insp. Number Stamp

Skidtubes

Memo

0.00

1-Open X-Bolt holes to finish size as per Dwg D3582, all sections

2-Counter Sink X-BOLT holes as per Dwg D3582

3-Deburr and blow out chips from inside of tube, prep. tube for welding

4-Bond web as per Dwg D3582 & QSI Q15 A/R 241 Sike Flex Batch:

Exp Date: (1)

10-10-19

5-Weld x-bolt spacers(D2973) as per Dwg D3582 section B-B. Batch: 1157 A/R AL ROD

6-Grind welds flush

QC10- Inspect visual per QSI004- ground welds

BE 10/10/21

200

QC

Quality Control

Memo

Dart A	Aerospace	Ltd
--------	-----------	-----

	-								•
W/O:			WO	RK ORDER CHANGE	S				`
DATE	STEP	PR	OCEDURE CHAN	GE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
<u></u>		78.1	***********			· · · · · · · · · · · · · · · · · · ·			
				100 Mg AV 40 AV					}
Part No	:	PAR #:	Fault Categ	ory:	NCR: Yes	No DQ	A:	Date: _	
	Res	solution:	Disposition	·	QA: N/C Cld	osed:		Date: _	
NCR:	487		WORK ORDE	R NON-CONFORMAN	NCE (NCR)			
DATE	STEP	Description of NC		Corrective Action Section		Verific	ation	Approval	Approval
DAIL	SIEF	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Secti		Chief Eng	QC Inspector

Work Order ID 62877

Tuesday, October 12, 2010 1:04:37 PM



Page 6

Item ID:

D117-762-041

Accept



Setup . Start

Stop



Revision ID:

Item Name:

Replacement Skidtube

Start Date:

10/12/2010

Start Qty: 1.00

Required Date: 10/22/2010 Req'd Qty: 1.00



Cust Item ID:

Customer:

Tool ID

Reference:

Approvals:

Process Plan:

Date:

Date:

Tooling:

Date:_

Tool # Plan

Code

Date:

Run Start

Stop



Sequence ID/ Work Center ID

210

Quality Control

Operation Description

QC5- Inspect part completeness to step on W/O

Memo

Set Up/ **Run Hours**

SPC (Y/N):

Accept

Qty

Reject

Qty

Reject Insp. Number Stamp

215

HandFinish

Hand Finishing

Pressure Wash per QSI005 4.3

Memo

0.00 => M 10/10/27

220

Powdercoat

Powder Coating

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00 BL 10-10-27.

0.00

0.00

Dart Aerospace I	Ltd
------------------	-----

W/O: 62	2877	WORK ORDER CHANGES					a.
DATE	STEP	PROCEDURE CHANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10/10/27	215	Realodine (Touch-up) As per PAR-09-043 Permaneut change.	H	10/10/27	X	/osiun	Josius
				10.11.13	4	10-11-09	10.11.03

Part No: 117-762-041 PAR #:	Fault Category:	NCR: Yes No DQA:	Date:
Resolution:	Disposition:	QA: N/C Closed:	Date:

NCR:		```	WORK ORE	DER NON-CONFORMANC	E (NCR)			
		Description of NC		Corrective Action Section B		Verification	Approval	Approval
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Chief Eng	QC Inspector
								<u> </u>
		·						
•								<u> </u>
						,		
		•					:	

Work Order ID 628	77	7
-------------------	----	---

Tuesday, October 12, 2010 1:04:37 PM



Page 7

Item ID:

D117-762-041

Accept



Setup Start



Revision ID:

Item Name:

Replacement Skidtube

Start Date:

10/12/2010

Start Qty: 1.00

Required Date: 10/22/2010 **Req'd Qty:** 1.00



Cust Item ID: Customer:

Tool ID

Reference:

Approvals:

Process Plan:

Date:

Date: Tooling:

SPC (Y/N):

0.00

0.00

Date:

Date:

Start Run

Stop

Stop



Sequence ID/ Work Center ID

230

QC

Quality Control

Operation Description

QC3- Inspect Part Finish

Memo

Set Up/ **Run Hours**

10/10/28

Tool # Plan Accept Qty Code

Reject Qty

Reject Insp. Number Stamp

240

HandFinish

Hand Finishing

HandFinishing

Memo

Install Wearplate & Ground Wire inserts as per Dwg D3582.

Dail Ae	ospace	ELIC							•
W/O:			WO	RK ORDER CHANG	ES				,
DATE	STEP	PRO	OCEDURE CHAI	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
- P. J.							. (
Part No	:	PAR #:	Fault Cate	gory:	_ NCR: Yes	No DQ	A :	Date:	
	R	esolution:	Disposition	n:	_ QA: N/C CI	sed:		Date: _	
NCR:	-		WORK ORDE	R NON-CONFORMA	NCE (NCR	ICE (NCR)			
DATE	STED Description of NC		Corrective Action		Section B Ver		rification Approval		Approval
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date		ion C	Chief Eng	QC Inspector
						,			

Work Order ID 62877

Tuesday, October 12, 2010 1:04:37 PM



Page 8

Item ID: **Revision ID:** D117-762-041

Accept



Setup Start



Item Name:

Replacement Skidtube

Start Date:

10/12/2010

Start Qty: 1.00

Reg'd Qty: 1.00



Cust Item ID: Customer:

Reference:

An	nrai	vals:
- Ap	יטיט	ais.

Process Plan:

Date:

Date:

Tooling:

Date:

Tool # Plan

Date:

Run Start

Stop

Required Date: 10/22/2010

Sequence ID/ Work Center ID

250

HandFinish Hand Finishing Description

Operation

HandFinishing

Set Up/ **Run Hours**

0.00

SPC (Y/N):

0.00

10/10/28

Tool ID

Accept Code Qty Qty

Reject Reject Number Stamp

Insp.

Memo

2-Install Aft cap as per Dwg D3582, Detail "C" A/R 241 Sika Flex Batch: M115114 Exp Date: 116

3-Install Wearplates as per Dwg D3582,

Note:Install Bolt and washer on Ground Wire inserts on top of tube see section D-D of dwg D3582

*******Do not install bolts where indicated on Dwg(Note #6)*****

A/R 241 Sika Flex Batch:

Exp Date: 1110/

A-assemble o'ring as per dwg D3492 and apply o'ring lube
A/R 55-o'ring lube batch: ↑/\ (()) & q

5- Wing Walk as per Dwg D3043 and QSI 005 4.4 //115790

260

QC5- Inspect part completeness to step on W/O

Memo

Quality Control

	13									•
W/O:			W	ORK ORDER CHANG	iES					3
DATE	STEP	PRO	OCEDURE CH	ANGE	В	у	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
						!				
Part No		DAD #.	Foult Cot		NCD.	/oo N	n DO	\	Doto	
Pail NO		PAR #:								
		esolution:							Date:	
NCR:			WORK ORL	DER NON-CONFORM	ANCE (I	NCR)				
DATE	STEP	Description of NC			tion B		Verific	ation	Approval	Approval
	0.2	Section A	Initial Chief Eng	Action Description Chief Eng		ign & Date	Secti	on C	Chief Eng	QC Inspector
					ŀ					
	_									<u> </u>
									·	
							,			
									-	
	1		l i				1		1	1

Work Order ID 62877

Tuesday, October 12, 2010 1:04:37 PM



Page 9

Item ID:

D117-762-041

Accept

Setup Start

Stop



Revision ID:

Item Name:

Replacement Skidtube

Start Date:

10/12/2010

Start Qty: 1.00

Required Date: 10/22/2010

Req'd Qty: 1.00



Cust Item ID: Customer:

Tool ID

Reference:

Approvals:

Process Plan:

Date:

Date:_____

Tooling:

0.00

0.00

SPC (Y/N):

Set Up/

Run Hours

Date:

Date:

Tool # Plan

Code

Run Start



Stop

Sequence ID/

Work Center ID

270

Packaging

Packaging

Operation

Description

Packaging

Memo Identify and nack for shipping as per PPP D117-762-041

PPP Rev

280

QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

Qty

Accept

Reject Qty

Reject Number Stamp

Insp.

10/11/12 12) ONF 10-11-11

W/O:			WO	RK ORDER CHANG	ES				•
DATE	STEP	PR	OCEDURE CHAN	IGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
-								riter.	
									4
Part No	•	PAR #:	Fault Categ	ory:	_ NCR: Yes	No DQ	A :	Date:	
	Re	esolution:	Disposition	•	_ QA: N/C C	losed:		Date: _	
NCR:			WORK ORDE	R NON-CONFORMA	NCE (NC	₹)			
DATE	STEP	Description of NC	Initial	Corrective Action Section Action Description	on B Sign		cation	Approval	Approval
		Section A		Chief Eng		ox Sport	ion C		QC Inspector
		Godion A	Chief Eng	Chief Eng	Date	3601	ion C	Chief Eng	QC Inspector
<u>-</u>			Chief Eng	Chief Eng	Date	3601		Chief Eng	QO IIISPECIOI
		Costonia	Chief Eng	Chief Eng	Date			Chief Eng	QC IIISPECIOI
		Costonia	Chief Eng	Chief Eng	Date	Georgia	ion C	Chief Eng	QC IIISPECIOI
		Codioni	Chief Eng	Chief Eng	Date	Georgia		Chief Eng	QC IIISPECIOI
		Costonia	Chief Eng	Chief Eng	Date	Georgia	ion C	Chief Eng	QC IIISPECIOI
		Codionia	Chief Eng	Chief Eng	Date	Geol	ion C	Chief Eng	QC IIISPECIOI
		·	Chief Eng	Crief Eng	Date		ion C	Chief Eng	QC IIISPECIOI
			Chief Eng	Crief Eng	Date			Chief Eng	QC IIISPECIOI

Picklist Print

Tuesday, October 12, 2010 1:04:41 PM

Work Order ID: 62877

Parent Item: D117-762-041

Parent Item Name: Replacement Skidtube



Start Date: 10/12/2010

Required Date: 10/22/2010

Start Qty: 1.00

Required Qty: 1.00

Comi	nents:
------	--------

IPP Rev:A□07.06.11□New Issue□ EC

IPP Rev. R 08-02-22 Schange to rev. A schend dwg DD verified by EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2962-150		Manufactured	No			—— -	Each	100.0000		1			
7.340 Outer Fulle, Extru				Location HALL	28672 59934	Loc	Oty 100 27 73	Loc Code	0-	D	10	-10	- Æ
D2964 		Manufactured	No		37734	140	Each	19.0000	1	1			-
				<u>Location</u> LG	1	Loc		Loc Code					
D2971 Cross Bolt Spacer		Manufactured	No	LO	14101	190	19 19 Each	27.0000		1	80	D-10	5-19
				Location	<u>1</u>	Loc		Loc Code					
03584-1 (1800) 1803 (1803 (1803 (1803 (1803)	II O 1 1 00 1	Manufactured	No	LG	44445	190	27 27 Each	0.0000	1	1	- B	E10/10	(2)
 				-	B 62534					1	33	10/10	/20s

Dait Ac	ospace	Liu							*
W/O:			WO	RK ORDER CHANG	ES				2
DATE	art No:	PRO	OCEDURE CHAI	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Part No		PAR #:							
T		solution:	Disposition	1:	QA: N/C	Closed:		Date: _	
NCR:		,	WORK ORDE	R NON-CONFORM	ANCE (NC	R)			
	STED	Description of NC			tion B	Verifi	cation	Approval	Approval
DATE	SIEF	Section A	Initial Chief Eng	Action Description Chief Eng	Sigr Dat	\& Sec.	tion C	Chief Eng	QC Inspector
									-
		~							
		- 10 maries (Maries)				,			

Crossbolt Spacer

ALS4-1032-130

Insert

Tuesday, October 12, 2010 1:04:41 PM Work Order ID: 62877 Parent Item: D117-762-041 Parent Item Name: Replacement Skidtube D2973 Manufactured 190 No Each Cross Bolt Spacer Location LG D3662-3 Manufactured Crossbolt Spacer Loc LG D3662-1 Manufactured No

Purchased

No

Start Date: 10/12/2010

Required Date: 10/22/2010

Start Qty: 1.00

Required Qty: 1.00

2 [[]|||]]|

i (884) ISBI

<u>n</u>	Loc	c Oty	Loc Code			
		162				11/1
14636		162			_2_	BE 10/10/21
	190	Each	27.0000	1	1	/ /

162.0000

ocation	Lo	c Qty	Loc Code			
)		27				
44456		27			/	BE10/10/21
	190	Each	19.0000	3	3	//

Location	Loc	Qty	Loc Code		
LG		19			/ / /
55328		19		_3	- 65/0/10/2/
	240	Each	1,047.000 3	36	
				H	10/10/28

Location		Loc Qty	Loc Code	
PKG11		998		
	114723	998		
ST282		10	M115911	x 3 6
	110511	10	1 (1.0) (1	
ST381		39		
	114654	39		

Dart Ae	rospace	e Ltd							•
W/O:			W	ORK ORDER CHANGE	S				5
DATE	STEP	PROC	EDURE CH	ANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
								-	
Part No	•	PAR #:	_ Fault Cat	tegory:	NCR: Yes	No DQ	A :	_ Date: _	
Resolution:			_ Dispositi	ion:	QA: N/C CI	osed:		Date: _	
NCR:		W	ORK ORI	DER NON-CONFORMAN	ICE (NCR)		•	
DATE	STEP	Description of NC	Corrective Action Section B			Veriticatio			Approval
DATE	SIEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date		ion C	Approval Chief Eng	QC Inspector
						,			
	 								

Tuesday, October 12, 2010 1:04:41 PM

Work Order ID: 62877 Parent Item: D117-762-041 Parent Item Name: Replacement Skidtube **Required Date: 10/22/2010** Start Date: 10/12/2010 Start Qty: 1.00 Required Qty: 1.00 ALS4-428-165 107.0000 Purchased No 240 Each 10/10/28 Inserts Location Loc Oty Loc Code FP. 6989 ST282 100 114172 100 D2965 250 Each 42.0000 Manufactured No Cap, 105 Skidtube Location Loc Oty Loc Code FP4 42 42 52057 D3508-3 Manufactured No 250 Each 2.0000 Wearplate Location Loc Qty Loc Code FP 38527 FP21 55339 D3508-9 Manufactured No 250 Each 4.0000 Wearplate Location Loc Qty Loc Code FP21 54580

	Paoc								•	
W/O:			WO	RK ORDER CHANGE	S				-5	
DATE	STEP	PRO	OCEDURE CHAN	IGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
	R									
		PAR #:	Fault Categ	jory:	NCR: Yes No DQA: Date					
	R	esolution:	Disposition	:	QA: N/C CI	osed:		Date: _		
NCR:		\	WORK ORDE	R NON-CONFORMA	NCE (NCF	R)				
DATE	OTED	Description of NC	<u> </u>	Corrective Action Section		Verific	ation	Approval	Approval	
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section		Chief Eng	QC Inspector	
									į.	
						,				
				74.00						
						- 1				

Picklist Print

Page 4

Tuesday, October 12, 2010 1:04:41 PM

Work Order ID: 62877 D117-762-041 Parent Item: Parent Item Name: Replacement Skidtube **Required Date: 10/22/2010** Start Date: 10/12/2010 Start Qty: 1.00 Required Qty: 1.00 D3558-3 Manufactured No 250 Each 13.0000 11 10/10/25 Gasket Location Loc Oty Loc Code FP 13 42253 1 55468 12 D3558-9 250 Each Manufactured No 18.0000 Gasket Location Loc Oty Loc Code FP 18 50928 4 14 55469 D3558-11 No 250 Each 3.0000 Manufactured Gasket Location Loc Qty Loc Code FP 3 3 42254 D3558-13 Manufactured No 250 Each 35.0000 Gasket Location Loc Qty Loc Code FP 35 55467 5955<u>8</u> 34

									•
W/O:			WO	RK ORDER CHANGE	ES				•
DATE	STEP	PRO	OCEDURE CHAI	IGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
		PAR #:	Fault Categ	jory:	NCR: Yes	R: Yes No DQA: Date			
	Re	esolution:	Disposition	:	QA: N/C CI	osed:		Date: _	
NCR:			WORK ORDE	R NON-CONFORMA	NCE (NCR	R)	•		
DATE	STEP	Description of NC			Section B Verific			Approval	Approval
	0.2.	Section A	Initial Chief Eng	Action Description Chief Eng	Date	Secti	on C	Chief Eng	QC Inspector
						,			į

Tuesday, October 12, 2010 1:04:41 PM

Tuesday, October 12, 2010 1:04:41 PI	·VI								
Work Order ID: 62877					· · · · · · · · · · · · · · · · · · ·				
Parent Item: D117-762-041									
Parent Item Name: Replacement Skidte	ube	1 (40)((4)		alf 89151 81981 1981 19	ll .		tart Date: Start Qty:	10/12/2010 1 00	Required Date: 10/22/2010 Required Qty: 1.00
D3508-11	Manufactured	No		250	Ft-		_		Required Qty. 1.00
	Manufactured	140		230	Each	12.0000		1 _M	10/10/24
			Location	Loc	: Oty	Loc Code			
	·		FP16		12				
			54644		12				
D3508-13	Manufactured	No		250	Each	3.0000	· 1	1	
Wearplate								24	10/10/24
			Location	Loc	: Qty	Loc Code			
			FP		3				
D2402.051			54645		3				_
D3492-051	Manufactured	No		250	Each	54.0000	2	2 	10/10/24
- •			Location	Loc	<u>Oty</u>	Loc Code			•
•			FP013		54				
			44633		4				
70.400.040			55622		50			-x2	
D3492-049	Manufactured	No		250	Each	29.0000	2	2	0110(24
. 105 . 100			Location	Loc	e Qty	Loc Code			
	,		FP011		29				
			55621		29			_x2	_
D3492-053	Manufactured	No		250	Each	19.0000	6)H	
			Location	Loc	Qty	Loc Code			
			FP		19				
		•	_54641		19			<u> X6</u>	
Tuesday, October 12, 2010 1:04:41 P.	M		Shop Pa	cket Print					Page 5

W/O:			WC	iES					
DATE	STEP	PRO	OCEDURE CHA	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
		PAR #:Fau							
						·			
					i e		į		
		to produce the second s							
Part No	:	PAR #:	Fault Cate	gory:	_ NCR: Yes	No DQ	A :	Date:	
NCR:			WORK ORD	ER NON-CONFORM	ANCE (NC	₹)			
DATE	CTED	Description of NC			tion B	Verifi	cation	Approval	Approval
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign Date	& Sect	tion C	Chief Eng	QC Inspector
									<u> </u>
					l L				
						,	,		

Tuesday, October 12, 2010 1:04:41 PM

Work Order ID: 62877						
Parent Item: D117-762-041						
Parent Item Name: Replacement Skidtu	be				Start Date: 1 Start Qty: 1	•
AN960JD10L NAS1149D0332J	Purchased	No	250	Each 0.000		2
Washer				1111348		x2 HI 1012121
AN3C4A BOLT	Purchased	No	250	Each 1,511	.000 28	28 H (0)(0/24
205.		Location	Loc Q	<u>Loc Co</u>	ode	
AN3C5A	Purchased	ST245 110139 ST303 115438 ST350 114108 114416 114523 115300 115589	8 8 6 3 9	20 20 3 3 488 14 12 2 460 000 Each 1,169		
Bolt		Location ST350 114330 115015 115371 115422 115594 115835 ST351	0 5 1 2 4 5	159 11 16 100 100 432 500 10	o de	

	-									
W/O:			WO	RK ORDER CHANG	iES					
DATE	STEP	PRO	OCEDURE CHAI	NGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Part No	:	PAR #:	PAR #: Fault Category: NCR: Yes No DQA: Date: Disposition: QA: N/C Closed: Date: WORK ORDER NON-CONFORMANCE (NCR)							
	Res	olution:	Disposition	n:	By Date Qty Chief Eng / Prod Mgr NCR: Yes No DQA: Date: QA: N/C Closed: Date: MANCE (NCR) Section B					
NCR:			WORK ORDE	ER NON-CONFORM	ANCE	(NCR))		,	
DATE	STEP	Description of NC				Cian P			Approval	Approval
		Section A		Chief Eng					Chief Eng	QC Inspector
							,			5

Tuesday, October 12, 2010 1:04:41 PM

Work Order ID: 62877 Parent Item: D117-762-041 Parent Item Name: Replacement Skidtube **Start Date: 10/12/2010 Required Date: 10/22/2010** Start Qty: 1.00 Required Qty: 1.00 AN960JD416L NAS1149D0416J Purchased No 250 223.0000 Each Il 10/10/28 Washer Location Loc Qty Loc Code ST346 223 106785 2 110153 221 AN960C10L NAS1149C0332 Purchased No 250 Each 29.0000 x28 41 10/10/28 washer Location Loc Oty Loc Code ST245 29 X Z0 107534 29 AN4-4A 250 Purchased No Each 186.0000 Bolt Location Loc Qty Loc Code ST356 183 114615 183 ST361 3 108138 2 111295 NAS1611-012 Purchased No 250 Each 110.0000 O-RING Location Loc Qty Loc Code FP 110 108673 113845 101

W/O:			W	ORK ORDER CHAN	GES					:
DATE	STEP	PRO	OCEDURE CH	ANGE	.	Зу	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC inspector
										
						ļ				
			·							
Part No	•	PAR #:	Fault Cat	egory:	NCR:	Yes I	No DQA:		_ Date: _	
Resolution:		esolution:	Dispositi	on:	QA: N	I/C Clo	sed:		Date: _	
NCR:			WORK OR	DER NON-CONFORM	IANCE (NCR))		***	
DATE	STEP	Description of NC	Corrective Action Initial Action Descri		ction B	ction B Sign &		tion	Approval	Approval
		Section A	Chief Eng	Chief Eng	<u> </u>	Date	Section	1 C	Chief Eng	QC Inspector
									-	
					:					

18/1

Tuesday, October 12, 2010 1:04:41 PM

Work Order ID: 62877

Parent Item:

D117-762-041

Parent Item Name: Replacement Skidtube



No

No

Start Date: 10/12/2010

Required Date: 10/22/2010

Start Qty: 1.00

Required Qty: 1.00

NAS1611-015

Purchased

Purchased

Each

25.0000

O-RING

Location		<u>L</u>	oc Qty
FP	1		25
107178			5
115101			20
		250	Each

250

Loc Code

109.0000

NAS1611-016

O-RING

Location	Loc Oty
FP	109
<u>107178</u>	9
112492	50
113524	50

Loc Code

		WORK ORDER CHANGES								
DATE	STEP	PROCEDURE CHANGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC inspector			
		•					*e			
i										
- 1/-										
				* :						
Part No:	·	PAR #: Fault Category:	· NOD W	es No D		D.1.				

Disposition:

QA: N/C Closed: ____

Date: ___

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE		Description of NC		Corrective Action Section B		Verification	Approval	Approval
UATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Chief Eng	Approval QC Inspector
								E A
ir fi pris	1, 14,			, political in the contract of			•	#
				•				,
	,							
				•				
				· · · · · · · · · · · · · · · · · · ·				·
				gal.				

NOTE: Date & initial all entries

Resolution:

PARTS LIST FOR D3582-041 SKIDTUBE ASSEMBLY

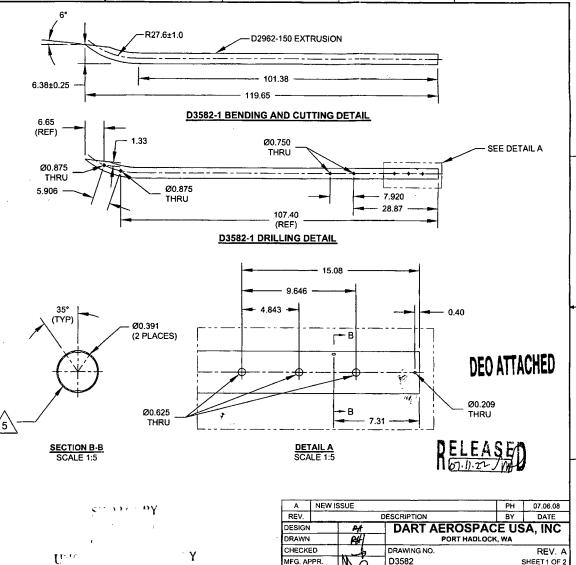
Qty	Part Number	Description
X	D3582-041	SKIDTUBE ASSEMBLY
1	D2962-150	EXTRUSION
1	D2964	CAP
1	D2965	CAP
1	D2971	CROSS BOLT SPACER
2	D2973	CROSS BOLT SPACER
2	D3492-049	PLUG ASSEMBLY
2	D3492-051	PLUG ASSEMBLY
6	D3492-053	PLUG ASSEMBLY
1 .	D3508-3	WEARPLATE
1	D3508-9	WEARPLATE
1	D3508-11	WEARPLATE
1	D3508-13	WEARPLATE
1	D3558-3	GASKET
1	D3558-9	GASKET
1	D3558-11	GASKET
1	D3558-13	GASKET
1	D3584-1	WEB ·
3	D3662-1	CROSS BOLT SPACER
1	D3662-3	CROSS BOLT SPACER
36	AELS-1032-130	INSERT
2	ALS7-428-165	INSERT
28	AN3C4A	BOLT
2	AN3-5A	BOLT
2	AN4-4A	BOLT
28	AN960C10L	WASHER
2	AN960JD10L	WASHER
2	AN960JD416L	WASHER

GENERAL NOTES:

- 1) ALL DIMENSIONS ARE IN INCHES
 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- WELDING TO BE DONE PER DART QSI 004.
- 4) INSERT D3584-1 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015 AFTER BENDING.
- 5) USE DART DRILL TEMPLATE DT8900 TO LOCATE AND DRILL Ø0.297 HOLES (36 PLACES) FOR WEARSHOE INSERTS. INSTALL AELS-1032-130 PER SECTION G-G (36 PLACES) AFTER FINISH. SEAL WEARPLATE BOLTS WITH SIKAFLEX-241/-291.
- 6) DO NOT INSTALL AN3C4A BOLTS AND AN960C10L WASHERS IN INDICATED

В

- A) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSERTING D3584-1 WEB.
- POWDER COAT ASSEMBLY GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3.
- C) ANTI-SKID PAINT AS INDICATED TO 1.00 ABOVE CENTER LINE PER DART QSI



TITLE

APPROVED

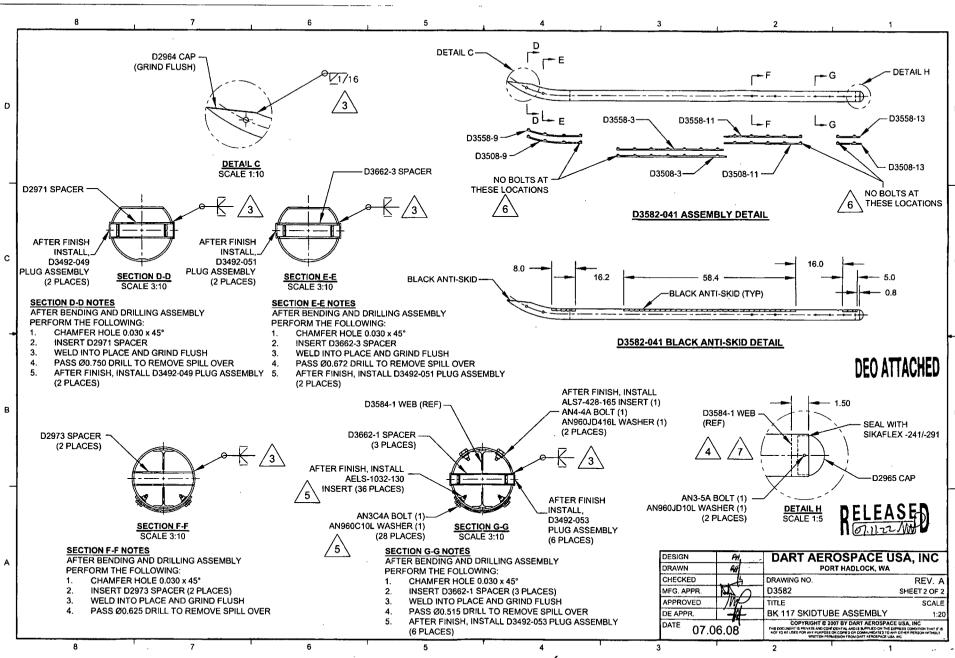
DE APPR

DATE

07.06.08

SHEET 1 OF 2 SCALE BK 117 SKIDTUBE ASSEMBLY 1:20 COPYRIGHT © 2007 BY DART AEROSPACE USA, INC.

Dait Ac	ospace	Liu							1 0		
W/O:			WO	RK ORDER CHANG	ES						
DATE	STEP	PRO	PROCEDURE CHANGE					Approval Chief Eng / Prod Mgr	Approval QC Inspector		
									Į.		
****		. '							:		
	,		•								
Part No	Part No: PAR #: _		Fault Categ	ory:	_ NCR: Yes	_ Date: _					
Resolution:			Disposition	I	_ QA: N/C C	losed:	··	Date: _	 .		
NCR:			WORK ORDE	R NON-CONFORMA	ANCE (NCI	₹)					
		Description of NC		on B	Verifi	cation	Approval	Approval			
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign Date	& Sect	Section C				QC Inspector
									;		
						,					



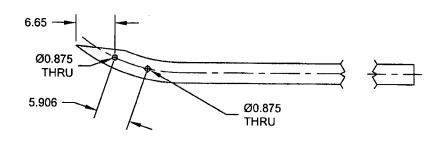
w/0 62877-

	•								
W/O:			WC	ORK ORDER CHANGI	ES				4
DATE	STEP	PF	ROCEDURE CHA	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
						- "			
				·					
Part No	:	PAR #:	Fault Cate	Fault Category: NCR: Yes No DQA: Da					
	Re	solution:	n:	QA: N/C CI	osed:		Date: _		
NCR:			WORK ORD	ER NON-CONFORMA	NCE (NCF	R)			
		Description of NC		Corrective Action Section	on B	Verific	ation	Approval Chief Eng	Approval
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign 8 Date		Verification Section C		QC Inspector
					:				
								٠.	
								·	
· · · · · · · · · · · · · · · · · · ·								, , , , , , , , , , , , , , , , , , , ,	

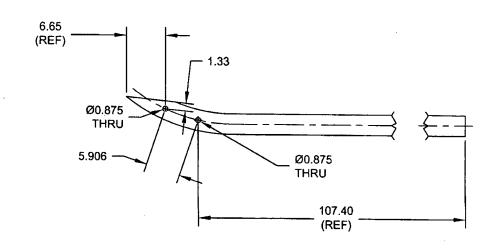
DRAWING			DART AEROSPACE US	A, INC D.E.O. NO.	SHEET NO.	SCALE
D3582	BK 117 SK	IDTUBE ASSEMBLY	ENGINEERING ORD	ER D3582-A-1	SHEET 1 OF 1	NTS
DRAWN	PH	CHECKED	MFG. APPR.	APPROVED (AN)	DE APPR.	
DATE	09.04.06	DATE 64.04.06	DATE 09.04.06	DATE MUSYIDA	DATE 09.04.00	6

FOR EASE OF MANUFACTURE AND TO ENSURE THE FIT OF BRISTOL WIRESTRIKE SKID GEAR DEFLECTOR: UPDATE DIMENSIONING OF 2 FWD HOLES ON SHEET 1 AS SHOWN

<u>IS:</u>







w/o 62877

COPYRIGHT © 2009 BY DART AEROSPACE USA, INC
THIS DOCUMENT IS PRIVATE AND CONDIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS
NOT TO BE USED FOR ANY PURPOSE ON COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT
WRITTEN PERMASSION FROM DART AEROSPACE USA, INC.

Dart Ae	rospace	Ltd							<u>&</u> •
W/O:		,	WC	RK ORDER CHANGE	S				
DATE	DATE STEP PROCEDURE CHANGE					Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
									۽ َ
									. k.***
· · · · · · · · · · · · · · · · · · ·	ميد			- 10 T					
Part No	•	PAR #:	Fault Cate	jory:	NCR: Yes	No DG	A:	Date:	
	R	esolution:	Disposition	1:	QA: N/C Closed:			-	
NCR:			WORK ORDE	ER NON-CONFORMAN	ICE (NC	R)			
		Description of NC		Corrective Action Section B		Vorif	iootion	A 1	
DATE	STEP	Section A	Initial Action Description Chief Eng Chief Eng		Sign Date	& Sec	ication tion C	Approval Chief Eng	Approval QC Inspector

	WORK ORDER NON-CONFORMANCE (NCR)								
	Description of NC Section A	Corrective Action Section B			Varification	A	A		
STEP		Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Chief Eng	Approval QC inspector		
7.7					:		. ,		
						i			
	>								
	**								
					<i>P</i>				
	STEP	STEP Description of NC Section A	STEP Description of NC Section A Initial Chief Eng	STEP Description of NC Section A Initial Chief Eng Corrective Action Section B Action Description Chief Eng	STEP Description of NC Section A Initial Chief Eng Corrective Action Section B Initial Chief Eng Chief Eng Chief Eng Corrective Action Section B Sign & Date	STEP Description of NC Section A Corrective Action Section B Verification Section C Chief Eng Ch	STEP Description of NC Section A Chief Eng Corrective Action Section B Sign & Date Chief Eng Chi		

NO.	230	
	1/1/	

AWS D17.1.2001 QUALIFICATION TEST RECORD

Name: Darday	Ellistt					
Job number: 5412	.\					
Part number: Dil) -	762-041					
Description: 1	skid tube					
Welding Process: Ti	ig[/] Mig[]					
Base materiel: 🔍 🗸	001014m					
Current: AC[\(\bar{\cappa}\)] D						
	~[]					
	TECT DEA	Y 777373% /	OTA TOTO	4377	DECE	
	TEST REQ	UIKEN	IEN 18	AND	<u>KESUI</u>	15
Visual:		pass[/]	fail[]			
Penetration:		pass[\(\sigma\)				
		hass[,]	ւաւլ յ			
UNACCEPTABLE						
UNACCEI TABLE						
Cracks:		pass[√]	failf]			
Undercut:		pass[\checkmark]				
Pin holes:						
		pass[/]				
Overlap (cold lap)		pass[v]				
Porosity (surface):		pass[//				
Coloration:		pass[~]	fail[]			

Qualifier O Date of Test Coupon 09/12/10

Welder Barlay Hust Date of Test Coupon 69/12/10

The above named individual is qualified in accordance with AWS D17.1.2001 to weld